California Regional Water Quality Control Board
Santa Ana Region

October 3, 2003

Item: 9

Subject: Panel Hearing Regarding the Terms of a Settlement Agreement between Kaiser Resources, Inc., and the Board

DISCUSSION

On October 21, 1993, the Regional Water Quality Control Board (Board) adopted Resolution No. 93-72 (Attachment #1) authorizing the Chairman of the Board to finalize and execute a Settlement Agreement with Kaiser Steel Resources, Inc. (Kaiser), on behalf of the Board. The Settlement Agreement, signed on November 16, 1993 by the Board Chair (Attachment #2), was developed to allow a salt offset program for Kaiser's high total dissolved solids (TDS) groundwater plume (plume). The Settlement Agreement required Kaiser to contribute $1.5 million to support the Santa Ana Watershed Project Authority (SAWPA) Chino Basin desalter project, and to abandon the rights to 1,000 acre-feet of water per year for 25 years to the Chino Basin Watermaster, in lieu of conducting direct plume remediation, as required by Cleanup and Abatement (CAO) Order No. 87-121 and Order No. 91-40, which revised CAO Order No. 87-121. Kaiser has fulfilled these obligations under the Settlement Agreement. By accepting the Settlement Agreement, Kaiser was absolved of its liability under CAO No. 87-121 and Order No. 91-40, with the proviso that Kaiser mitigate any adverse impacts (as defined in the Settlement Agreement) to existing, and otherwise useable, domestic or municipal wells that might be caused by their plume. Such mitigation may be through well replacement, wellhead treatment, or other mitigative measure.

Background information on CAO No. 87-121 and Order No. 91-40, as well as the history of the Kaiser facility and the groundwater problems associated with the site, is included in a staff report dated December 4, 1992 (Attachment #3).

The Settlement Agreement defines adverse impacts as impacts upon an otherwise useable well which cause the water to become unsuitable for its intended use due to excessive TDS, total organic carbon (TOC), or sulfate content caused by Kaiser's plume. For the purpose of the Settlement Agreement, an increase of 100 parts per million (ppm) or more of TDS over the background level occurring in a well creates the presumption that the water has become unsuitable for its intended use (Section O. 4. of the Settlement Agreement). The method to be used to determine the "background level" is not specifically defined by the Settlement Agreement.

The Settlement Agreement also states that the Board shall determine whether the Kaiser plume is the cause of any adverse impacts on existing domestic and municipal

wells, and on the significance of such impacts, based on evidence provided by Kaiser and the affected well owner, and by any other investigations that the Board requests. The Settlement Agreement also states that Kaiser is entitled to make its own investigations, present evidence to the Board, and participate in any Board hearings on the existence and significance of such impacts, and on any proposed mitigation measures. It should be noted that the Settlement Agreement indicates that Kaiser is not required to remediate other kinds of contamination present in an affected well or to remediate water quality beyond the degree of degradation caused by the Kaiser plume.

The Settlement Agreement does not provide a numeric value for the background TDS level in any wells within the vicinity of the plume. However, Section O. 5. of the Settlement Agreement states that Kaiser is only required to restore the degraded water to a quality that would have existed in the absence of the Kaiser plume.

On March 15, 2001, Board staff received a letter from legal counsel representing the City of Ontario formally requesting enforcement of the Kaiser Settlement Agreement provision to mitigate the adverse impacts of Kaiser's plume on City of Ontario Well No. 30. It should be noted that the City of Ontario expressed concerns regarding adverse impacts on Well No. 30 at the time the Board considered approval of the settlement agreement. At that time, however, Well No. 30 was shut down due to mercury contamination. Therefore, Kaiser was not obligated to provide mitigation under the terms of the Settlement Agreement because Well No. 30 was not "otherwise useable." Mercury problems in Well No. 30 persisted until 1998.

From March 15, 2001 to the present, representatives from the City of Ontario, Kaiser and RWQCB staff have reviewed the available data and have met several times to discuss the data and a potential course of action. Because of the complexity of the hydrogeology, the groundwater flow directions, and the geochemistry of the groundwater, different interpretations can be drawn from the data. In general, the City of Ontario has interpreted the data to indicate that the Kaiser plume has caused an increase in TDS levels in excess of 100 mg/l in Well No. 30. Kaiser, on the other hand, has interpreted the data to indicate that an increase in TDS levels over 100 mg/l has not occurred in Well No. 30 because of Kaiser plume migration. Further, Kaiser contends that the source for the observed TDS increase in Well No. 30 is from other potentially responsible parties, particularly Union Carbide (now Praxair), located upgradient of Well No. 30 and downgradient of the Kaiser facility (Figure 1).

TOTAL DISSOLVED SOLIDS IN GROUNDWATER

In response to a cleanup and abatement order adopted by the Board, Kaiser conducted several groundwater investigations that revealed the presence of a plume of TDS and TOC emanating from the Kaiser facility. Exact groundwater flow directions are difficult to predict in the area of concern due to the complex subsurface geology and hydrogeology and the presence of pumping fields. In general, however, the groundwater flow direction is toward the southwest (toward Well No. 30 – See Figure 1).

A comparison of the TDS data for Well No. 30 and the nearest surrounding wells that appear to be unaffected by the TDS plume (Well Nos. 26, 27, 31, and 36 and the Filippi Winery Well), does not indicate a regional rising trend in TDS values. Therefore, these data suggest that the increase in TDS observed at Well No. 30 is not a regional trend, but is caused by an upgradient source. Attachment #4 provides a summary table of some of the TDS concentrations available to RWQCB staff for the above-mentioned wells.

In addition to TDS concentration data, Stiff diagrams (a method of graphically comparing the concentration of selected anions and cations in different samples) have been created by the City of Ontario to illustrate that the chemical signature of groundwater collected from Well No. 30 has changed over time, whereas the chemical signatures of the surrounding wells have not shown similar changes. The Stiff diagrams were generated by plotting concentrations of calcium (Ca), magnesium (Mg), bicarbonate (HCO_3^-), sulfate (SO_4), sodium (Na), and chloride (Cl) for each groundwater sample collected. Because TDS measurements in groundwater are typically comprised of these ions, the Stiff diagrams are representative of the TDS in groundwater at the wells sampled.

SOURCE OF TDS

The TDS concentrations in Well No. 30 have been increasing since mid-1980. Sulfate appears to have the most significant increase in concentration relative to the other ions in the elevated TDS samples. From previous investigations at the Kaiser facility, it is known that high TDS water with elevated concentrations of sulfate was discharged to several unlined ponds on the Kaiser property. However, high TDS water with possible elevated levels of SO_4 (Attachment #5) has also been reported to have been discharged at the Praxair facility, formerly known as Union Carbide. This facility, located upgradient of Well No. 30 and downgradient of the Kaiser facility (Figure 1), discharged high TDS industrial process water to a number of different unlined surface impoundments between 1962 and 1979. In 1991, a production well (UCH2) located at the Praxair/Union Carbide facility was reportedly shut down because of elevated TDS concentrations (Attachment #6). This history of discharges at the Praxair/Union Carbide facility suggests that there could be more than one source of high TDS water upgradient of Well No. 30. However, it is also possible that Kaiser's plume migrated beneath the Praxair/Union Carbide facility and caused the elevated TDS concentrations that required them to shut down UCH2 in 1991. On April 14, 2003, the Executive Officer issued an investigation order to Praxair requiring submittal of wastewater, soil, and groundwater quality data. Praxair has submitted some of the data required by the order, and is currently searching for additional relevant historical records.

At present, it is not possible to conclusively determine whether the Kaiser plume is the sole source of the elevated TDS concentrations in Well No. 30. No detailed water quality comparisons were conducted at Well No. 30, the Kaiser wells, and other local wells before 1999. Additionally, the local groundwater flow directions and velocities are

not well understood because of continually changing inputs and extractions in this part of the Chino Basin. The TDS data available are also difficult to interpret because the water samples were collected from both production wells and monitoring wells. Data collected from production wells do not meet the same quality standards as those collected from properly constructed monitoring wells, making the validity of the data comparisons questionable. At this time, Kaiser is the only party known to have contributed to increases in TDS in groundwater in the vicinity of Well No. 30. If adverse TDS impacts attributable to other parties are demonstrated in the future, staff would recommend that the Board require those parties to provide appropriate mitigation, including possible participation in any mitigation that may be provided by Kaiser in the future.

SUMMARY AND CONCLUSIONS

In order the resolve the dispute between Kaiser and the City of Ontario regarding the proper application of the Settlement Agreement to the TDS impacts at Well No. 30, the Board will need to consider the following questions:

1. How is the term "background level," as used in the Settlement Agreement, to be applied?

2. Has the TDS concentration in Well No. 30 increased by 100 mg/l or more over background quality?

3. If the TDS concentration in Well No. 30 has increased by 100 mg/l or more, is there evidence to indicate that parties other than Kaiser contributed to the increase?

4. Based on the answers to the above questions, is there a presumption that Well No. 30 is unsuitable for its intended use, as defined by the Settlement Agreement?

5. If the presumption described in #4 exists, is there other evidence to contradict this presumption?

The answers to these five questions will determine if Kaiser is obligated, under the terms of the Settlement Agreement, to provide mitigation to the City of Ontario for TDS impacts in Well No. 30. Board staff has reviewed all of the available data and considered a number of differing interpretations. A summary of the data submittals by the two parties and the correspondence between Board staff, the City of Ontario, and Kaiser representatives is presented in Attachment #7. Based upon our review of the available information, Board staff has the following preliminary recommendations on the above points:

1. A review of the Settlement Agreement and the record of the Board's approval of the agreement (including testimony by Board staff, Kaiser representatives, and City of Ontario staff at the Board's hearings on the agreement), indicates that the

"background level" was intended to represent the TDS quality that would exist in a well (at any point in time) absent any TDS contribution by Kaiser.

2. As noted above, the data indicate that TDS concentrations in Well No. 30 have increased and that this increase does not reflect a regional increase in TDS. Staff believes that an increase of more than 100 mg/l in TDS, caused by one or more upgradient sources, has occurred in Well No. 30.

3. Kaiser has alleged that discharges at the Praxair facility could have contributed to TDS effects on Well No. 30. It is clear that high-TDS discharges occurred historically at the Praxair site. Board staff is awaiting additional information from Praxair regarding groundwater quality underlying that site. At this time, however, there is no evidence to conclusively demonstrate that historic discharges at Praxair have actually affected groundwater quality at Well No. 30.

4. Absent new information regarding TDS contributions by parties other than Kaiser, Board staff believes that the presumption of Well No. 30 being unsuitable for its intended use (as defined in the Settlement Agreement) has been triggered.

5. Neither Kaiser nor the City of Ontario has submitted information regarding the actual suitability or unsuitability for use of Well No. 30. Absent such information, Board staff believes the presumption of unsuitability would govern. It should be noted, however, that Board staff is unaware of any regulatory standard that would preclude Well No. 30 from being used based on its existing quality.

RECOMMENDATION

Board staff believes that additional information relevant to the above issues will be presented by the parties as part of the Panel Hearing. Board staff will present a final recommendation to the panel at the conclusion of the hearing.

ATTACHMENT #1

California Regional Water Quality Control Board
Santa Ana Region

October 21, 1993

ITEM: 12

SUBJECT: Consideration of Resolution No. 93-72, Approving an Agreement with Kaiser Resources, Inc., Regarding a Salt Offset Program

DISCUSSION:

On March 5, 1993, the Board adopted Resolution No. 93-19, which approved an agreement between the Board and Kaiser Resources, Inc. (KRI), regarding a salt offset program. In summary, this program specified that KRI would contribute to the Santa Ana Watershed Project Authority's (SAWPA) Chino Basin desalter project in lieu of conducting a direct remediation program for salts, as required by Cleanup and Abatement Order No. 87-121 and Order No. 91-40, previously adopted by the Board. Background information on these orders, as well as the history of the KRI facility and the groundwater pollution problems associated with the site, is included in a staff report dated December 4, 1992. The details of the salt offset program approved by Resolution No. 93-19 are described in a staff report dated March 5, 1993. Copies of these reports, as well as a copy of Resolution No. 93-19, are attached for reference.

Resolution No. 93-19 provided for an agreement wherein KRI would have paid $1.5 million to SAWPA, and transferred rights to 1,000 acre-feet of water per year for 25 years to the Chino Basin Watermaster. (The present worth value of this package is approximately $8.6 million.) These water rights would have been used to reduce the replenishment obligation of the desalter project. Under the terms of the agreement, the Board would work with Watermaster to implement the necessary institutional arrangements to accomplish the transfer and replenishment reduction. Resolution No. 93-19 specified that if the water rights transfer issue could not be resolved within six months, the agreement with KRI would become null and void. Those six months have elapsed without the necessary arrangements being accomplished, and the prior agreement with KRI has therefore expired.

Staff continues to believe that an offset program like that envisioned by Resolution No. 93-19 will provide greater basin-wide water quality benefits than a KRI direct remediation effort. We have therfore negotiated a new, revised agreement with KRI. This tentative agreement is substantially similar to the prior agreement, and includes the following key elements:

- KRI will contribute $1.5 million to support the SAWPA desalter project or a similar project approved by the Board.

- KRI will abandon rights to 1,000 acre-feet of water per year for 25 years to the Chino Basin Watermaster, provided that Watermaster develops a program to satisfy any replenishment obligation of the desalter project.

- If the replenishment program is not developed within one year, KRI will contribute an additional $1.5 million to the desalter project, in lieu of the water rights abandonment.

- KRI will mitigate any future adverse impacts on existing domestic or municipal wells caused by its plume.

- The Board will release KRI from its responsibilities under Cleanup and Abatement Order No. 87-121 and Order No. 91-40, provided that KRI fulfills its commitments under the agreement.

Several differences exist between this draft agreement and the prior agreement. Key changes include the following:

- The mechanics of the water rights transfer have been changed to allow this to occur within current Watermaster rules and regulations. The desalter replenishment relief contemplated by the agreement can also be accomodated within existing programs. (In fact, Watermaster has already adopted a resolution establishing the framework of the necessary program to satisfy the replenishment obligation.)

- The provision for contribution of an additional $1.5 million if the water rights transfer cannot be implemented has been added. With the addition of this "backstop" provision, the expiration date has been eliminated.

- KRI's well mitigation responsibilities have been clarified. Language has been added to include a total dissolved solids increase of 100 mg/l in the definition of "adverse impact." The revised agreement also would not require KRI to mitigate wells that have been previously polluted by other sources.

- Other minor editorial changes have been made.

If the water right transfer occurs (as now appears likely based on Watermaster's recent action), the present worth value of KRI's offer will be $8.6 million, the same as the proposal approved by the Board in Resolution No. 93-19. Staff believes that the current proposal is appropriate to satisfy KRI's responsibilities and will contribute to substantial water quality benefits in the Chino Basin. Therefore, staff has prepared a tentative resolution authorizing the Chairman to execute this agreement on behalf of the Board.

RECOMMENDATION:

Adopt Resolution No. 93-72, approving KRI's salt offset program and authorizing the Chairman to execute an agreement implementing that program.

California Regional Water Quality Control Board
Santa Ana Region

Resolution No. 93-72

regarding
Kaiser Resources, Inc.

The California Regional Water Quality Control Board, Santa Ana Region (hereinafter Board) finds:

1. On August 26, 1987, the Board adopted Cleanup and Abatement Order No. 87-121, requiring Kaiser Steel Corporation to conduct investigation and remediation of a plume of degraded groundwater emanating from its facility in Fontana. Kaiser Steel Corporation was subsequently reorganized as Kaiser Resources, Inc. (hereinafter KRI).

2. On March 15, 1991, the Board adopted Order No. 91-40, which amended the time schedule contained in Cleanup and Abatement Order No. 87-121. This change was made to allow KRI to further explore a salt offset option as a remedial alternative for the plume.

3. In a letter dated November 5, 1992, KRI submitted a proposal for a salt offset program in fulfillment of the remediation requirements of Cleanup and Abatement Order No. 87-121, as amended by Order No. 91-40. KRI proposed to contribute to the Chino Basin desalter project currently being developed by the Santa Ana Watershed Project Authority (SAWPA). KRI offered to provide $1.5 million and its rights to 1,000 acre-feet of water per year for 25 years to support the project.

4. On March 5, 1993, the Board adopted Resolution No. 93-19 and a settlement agreement with KRI, implementing the salt offset proposal described in Finding 3, above. The resolution specified that if the terms of the settlement agreement were not fulfilled within six months (i.e., by September 5, 1993), the agreement would become null and void.

5. The transfer of KRI water rights for the benefit of SAWPA's desalter project, as required by the settlement agreement, has not occurred due to factors beyond KRI's and the Board's control. The settlement agreement adopted on March 5, 1993 is thus null and void.

6. KRI has now proposed to enter into a revised settlement agreement with the Board. KRI's proposal would provide for an initial payment of $1.5 million for support of SAWPA's desalter project (or an equivalent project sponsored by Jurupa Community Services District or other party), and an abandonment of 1,000 acre-feet of water per year for 25 years to the Chino Basin Watermaster. If the abandonment described in the settlement agreement cannot be accomplished within 12 months, KRI would make an additional cash payment of $1.5 million to the designated desalter project.

7. The Chino Basin desalter project will provide a significant net benefit to water quality in the Chino Basin and in the lower Santa Ana River Basin by removing large quantities of salt from the groundwater. The success of this project justifies the encouragement of participation of certain dischargers in lieu of direct remediation.

8. Based on studies by KRI, calculations by SAWPA staff, and evaluations by Board staff, KRI's offer is an appropriate offset of its salt contribution to the basin, and satisfies the remediation requirements of Cleanup and Abatement Order No. 87-121, as amended by Order No. 91-40.

9. KRI has proposed to enter into an agreement with the Board establishing the details of KRI's offer and settlement of Orders No. 87-121 and 91-40. A tentative agreement has been drafted and is attached to this resolution.

Therefore, the Board approves the settlement agreement, as drafted, and authorizes the Chairman to sign the agreement, subject to the following conditions:

1. The Board authorizes the Chairman to finalize and execute the subject agreement with KRI on behalf of the Board.

2. Partial performance of KRI's obligations will be taken into consideration by the Board in approving any further enforcement action or subsequent settlement agreement with KRI.

3. Only those environmental effects specifically delineated in the body of the settlement agreement and the attachments thereto are covered by the agreement. Any other effects which are the result of KRI's activities at the site not described in the settlement agreement may be the subject of separate enforcement actions by the Board without regard to this agreement.

4. The Executive Officer shall notify KRI that payment is due, as required by Item 2, page 9 of the agreement, only after adoption of a resolution by the desalter project proponent expressing its intent to proceed with the Chino Basin desalter project.

5. Upon completion of the agreed-upon transfer of funds and water rights, the Executive Officer is directed to rescind Cleanup and Abatement Order No. 87-121 and Order No. 91-40.

I, Gerard J. Thibeault, Executive Officer, do hereby certify that the foregoing is a full, true, and correct copy of a resolution adopted by the California Regional Water Quality Control Board, Santa Ana Region, on October 21, 1993.

GJ Thibeault

Gerard J. Thibeault
Executive Officer

ATTACHMENT #2

KAISER RESOURCES, INC. - CALIFORNIA REGIONAL WATER QUALITY CONTROL BOARD, SANTA ANA REGION

SETTLEMENT AGREEMENT

PARTIES

This Agreement is entered into this 21st day of October, 1993, by and between Kaiser Resources, Inc. ("KRI"), the reorganized successor to Kaiser Steel Corporation ("KSC"), and the California Regional Water Quality Control Board, Santa Ana Region (the "BOARD"). KRI and the BOARD are referred to collectively as the "Parties."

RECITALS

This Settlement Agreement is entered into with respect to the following facts:

A. Between 1943 and 1983, KRI operated an integrated steel manufacturing facility in Fontana, California. During the first 30 years of operation at the facility, a portion of KRI brine wastewaters were diverted to unlined surface impoundments on site, and the water percolated into the soil. This practice was industry standard and within existing regulations at the

time. In the early 1970's, the surface impoundments were lined to eliminate discharges to groundwater.

B. KRI conducted three phases of a groundwater investigation which revealed the presence of a plume of degraded groundwater emanating from the facility. The plume contains salts, measured as Total Dissolved Solids (TDS), at concentrations between 500-1200 mg/1, and organic compounds, measured as total organic carbon (TOC), at concentrations up to 70 mg/1. The TOC consists primarily of acetic and propionic acid (biological breakdown products of animal-based oils.) Extensive groundwater investigations conducted pursuant to cleanup and abatement orders from the Regional Board failed to reveal the presence of any priority pollutants in the TOC plume.

C. The plume is migrating from the facility in a southwest direction at approximately 300 feet per year. It is within the top 150 feet of the saturated zone, and is approximately 12,000 feet long and 3,000 feet wide. Currently, the plume is almost entirely off the KRI site. The Phase IV Groundwater Remediation Feasibility Study - Draft Report, November 1991 investigation defined an area, hereinafter referred to as the potential impact area, where KRI's plume will migrate through the Chino Basin. The southern boundary of the potential impact area contains the well field for SAWPA's desalter. The desalter well field will ultimately intercept the KRI plume.

Exhibit "A" to this Agreement, incorporated by this reference, depicts the present location of the plume and the potential impact area.

D. The KRI facility overlies the Chino I groundwater subbasin (TDS objective 220 mg/1), and the plume currently extends into the Chino II groundwater subbasin (TDS objective 330 mg/1.)

E. On August 26, 1987, the Regional Board, pursuant to its authority under Section 13304 of the California Water Code, issued Cleanup and Abatement Order (CAO) No. 87-121, which required KRI to engage in additional groundwater investigation and remediation of the plume. Pursuant to the bankruptcy court-approved Plan of Reorganization for KSC, KRI became responsible for compliance with the Cleanup and Abatement Order. KRI completed the plume investigation and identified remediation alternatives. Initially, all of these alternatives centered around a direct plume remediation system: either extract and treat groundwater for reuse; or extract and discharge groundwater to the Chino Basin Non-reclaimable Waste System for non-reclaimable wastes and brines.

F. Early in 1990, KRI began to consider a salt offset project as an alternative to direct remediation by extraction and treatment. KRI proposed to study the feasibility of

participating in the construction and operation of a south Chino Basin desalter project as a means of offsetting the effect of its salt plume.

G. Because CAO No. 87-121 focused on direct remediation technologies, it did not provide adequate time for KRI to investigate the salt offset option. On March 15, 1991, the Board adopted Order No. 91-40, which revised CAO No. 87-121 to allow KRI additional time to conduct further study of the salt offset approach.

H. Since that time, KRI has worked to identify a specific proposal that would accomplish an appropriate salt offset. Initially, detailed discussions occurred between Board staff, KRI, and the Santa Ana Watershed Project Authority ("SAWPA"), a joint powers agency organization existing pursuant to the laws of the State of California and to a certain Joint Powers Agreement of January, 1975, exercising the powers common to its member agencies. SAWPA has undertaken a project to remove excess salts from the groundwater of the Chino Basin by means of the construction and operation of one or more desalting plants, to be located in the lower Chino Basin, which would remove excess salts from the groundwater, dispose of the resulting brines in the Santa Ana Regional Interceptor (SARI) line, and make the reclaimed ground water available for use. KRI proposed that it fulfill its groundwater remediation obligations imposed by CAO

Nos. 87-121 and Order No. 91-40 by participating in SAWPA's desalter project. Board staff, SAWPA, and KRI subsequently focused on the amount of salt KRI is responsible for remediating, and the degree of KRI participation in the desalter project which would accomplish an offset of that amount of salt.

I. Studies done by KRI have produced a range of estimates of the amount of salt KRI could be required to remove from the basin in satisfaction of CAO No. 87-121 and Order No. 91-40. These estimates have ranged from 47,000 tons to 104,000 tons. Board staff reviewed the assumptions that were used to prepare these estimates, and decided that the 104,000 ton figure is most consistent with the Basin Plan and the Board's regulatory program. Therefore, Board staff worked with KRI and SAWPA to identify a proposal that would offset that amount of salt. Discussions have also occurred between KRI and SAWPA to identify an appropriate means of contribution to the desalter project. Throughout this process, KRI has pursued an offset proposal that would involve a contribution of both cash and KRI water rights to the project.

J. KRI thereafter proposed to SAWPA and to Board staff that it make a one-time contribution of $1.5 million dollars, together with water rights of 1,000 acre-feet of water a year for a period of 25 years, which are a portion of its water rights established under the Judgment entitled Chino Basin

Municipal Water District v. City of Chino, et al., San Bernardino Superior Court Case No. RCV 51010 (formerly Central District Case No. 164327), dated January 27, 1978, for the use and benefit of the SAWPA desalter project, as full satisfaction of, and release from, CAO No. 87-121 and Order No. 91-40.

K. The Board and SAWPA have performed calculations to determine the present worth value of KRI's proposal, and to determine whether the resulting salt removal will be equivalent to that salt removal amount required by CAO 87-121 and Order No. 91-40 to be remediated by KRI. The Board and SAWPA determined, based on these calculations, that KRI's offer would be equivalent to the removal of at least 100,000 tons of salt over a 20-year project life (or more if a longer project life is assumed).

L. The Phase IV report prepared by KRI's consultant and submitted to the Board concluded that an appropriate salt offset program would be a superior alternative to a direct remediation program, and would produce more basin-wide benefits than those likely to result from direct plume remediation, and further, that the unremediated plume would not significantly adversely impact the beneficial uses of groundwater in the lower Chino Basin. As discussed in the Phase IV report, SAWPA's Chino desalter No. 2 is substantially more efficient at removing salt from the basin than KRI's least-cost direct remediation alternative. Furthermore, municipal water users would gain from

the salt offset alternative because it would produce more treated groundwater for use at a lower cost to the users than the direct remediation alternatives. The resources made available by KRI's contribution would enable the SAWPA project to begin on an earlier time schedule than originally anticipated, thus enabling salt to be removed and useable water to be produced much sooner than scheduled.

M. Thereafter, on March 5, 1993, the Parties entered into an Agreement and Discharge of CAO No. 87-121 and Order No. 91-40, in which KRI agreed to pay the sum of $1.5 million dollars for the sole use of SAWPA's desalter project or such other equivalent project which might be approved, and further agreed to assign to the Chino Basin Watermaster 1,000 acre-feet per year of KRI's water in storage, for a period of 25 years, for the benefit of the SAWPA desalter project or other equivalent project. The Agreement was made contingent on the approval by September 5, 1993 by the Superior Court of San Bernardino County of certain rules and regulations of the Chino Basin Watermaster and Pool Committee, which would allow the assignment of stored water by KRI to the Watermaster, and allow the Watermaster to assign KRI's water to the desalter project. The court did not approve the necessary rules and regulations by September 5, 1993, and the March 5, 1993 agreement has expired.

N. The parties believe that despite the expiration of the former agreement, an appropriate salt offset agreement is in their best interests, and the best interests of the public, and therefore have agreed to enter into a new agreement which substantially incorporates the basic terms of the March 5, 1993 Agreement, but does not require any modifications to the Watermaster Rules and Regulations, and allows the Regional Board more flexibility and control.

O. The Parties desire to resolve and settle all of KRI's liability under Cleanup and Abatement Order 87-121 and Order No. 91-40, and to declare such Orders fully satisfied and no longer subject to enforcement by the Board through the acceptance and implementation of this Agreement. The parties further desire through this Agreement to resolve and settle for all time all of KRI's liability for any future enforcement activities arising out of the existence of the degraded groundwater plume described by this Agreement, except as specifically set forth in Paragraphs 4 and 5 of this Agreement. Nothing in this Agreement shall be construed as an admission of liability or wrongdoing by any party.

AGREEMENT AND DISCHARGE OF CAO

NO. 87-121 AND Order No. 91-40

1. Recitals A through O are incorporated into this Agreement.

2. KRI agrees to pay the sum of $1.5 million dollars for the use of SAWPA's desalter project; or a desalter project implemented by, or for the benefit of the Jurupa Community Services District ("JCSD"); or such other equivalent project which may be approved by the Regional Board. KRI will make this payment into a special account to be established by the State Water Resources Control Board for this purpose; or, alternatively, directly to SAWPA's Project 14; or to a Trust Account to be established by the Jurupa Community Services District, as directed by the Chairman of the Regional Board. KRI will make such payment within ten days after notification by the Executive Officer of the Board that the special account has been established, or that SAWPA's Project 14 has agreed to accept a direct payment, or that a Trust Account for this purpose has been established by JCSD.

3. If the Chino Basin Watermaster determines within 12 months of the date of execution of this Agreement that the desalter project selected to benefit from this Agreement by the Regional Board will not have a replenishment requirement, or, in

the alternative,if there is a replenishment requirement, allows stored water transferred or abandoned from the Overlying Non-agricultural pool (in which KRI's water rights are decreed) to be used in part or in whole to satisfy the replenishment obligation of the desalter project, KRI will execute a written election to abandon 1,000 acre-feet a year of water from its storage account for 25 years. KRI's adjudicated water rights, from which its stored water is derived, are those established by the Chino Basin judgment, Chino Basin Municipal Water District v. City of Chino, et al., San Bernardino Superior Court Case No. RCV 51010 (formerly Central District Case No. 164327), dated January 27, 1978. KRI agrees to make such future transfers of water into storage as may be required to fulfill the terms of this Agreement. The abandonment of 1,000 acre-feet a year of water shall begin at the time the Watermaster determines either that the desalter project will not have a replenishment obligation, or that transferred or abandoned water from the Overlying Non-agricultural pool may be used to satisfy the replenishment obligation of the desalter project, and shall continue for the next consecutive 25 years, contingent on the continuing determination of the Watermaster that the desalter project will not have a replenishment obligation, or that abandoned or transferred Overlying Non-agricultural pool water may be used to meet the desalter replenishment obligation.

In the event that the Watermaster does not make either determination within 12 months of this Agreement, KRI agrees to pay the additional sum of $1.5 million dollars for the benefit of the selected desalter project, which sum will be in lieu of the 1,000 acre-feet of water a year for 25 years, and KRI shall have no further obligation under this paragraph 3. This amount shall be paid by KRI to one of the three accounts described in Paragraph 3 of this Agreement, as directed by the Chairman of the Regional Board. It shall be due and payable one year after the Watermaster makes its determination regarding the replenishment obligation of the desalter, but no earlier than October 21,1995, together with interest beginning one year after the date of this Agreement, at the rate fixed for one year treasury bills as of the date interest begins.

4. Groundwater investigations carried out pursuant to CAO No. 87-121 and Order No. 91-40 determined that no existing domestic or municipal wells were likely to be adversely affected by the continued migration of the degraded groundwater plume emanating from KRI's Fontana facility. Adverse impacts are defined as impacts upon an otherwise useable well which cause the water to become unsuitable for its intended use due to excessive TDS, TOC, or sulfate from KRI's plume. For the purposes of this Agreement, an increase of 100 parts per million or more of TDS over the background level occurring in a well, caused by the Kaiser plume, creates the presumption that the water has become

unsuitable for its intended use. However, if such adverse impacts to existing and otherwise useable domestic or municipal wells are nevertheless found to be caused by the degraded plume, KRI will continue to be responsible for reasonable mitigation of such impacts for a period not to exceed 50 years. The Regional Board shall determine, based on evidence provided by KRI and the affected well owner, and on such other investigation as it shall require, whether the KRI degraded groundwater plume is the cause of any adverse impacts on existing domestic and municipal wells, and on the significance of such impacts. KRI shall be entitled to make its own investigations, present evidence to the Board, and participate in any Board hearings on the existence and significance of such impacts, and on any proposed mitigation measures. If the Regional Board ultimately determines that the KRI plume is the cause of any adverse impacts on existing, otherwise usable domestic and municipal wells, KRI agrees that it will undertake the mitigation measures required by the next succeeding paragraph. KRI shall not be responsible for remediating water quality degradation not caused by the degraded groundwater plume.

5. KRI's obligation to mitigate the adverse impacts caused by its plume are limited to remediation of the degraded water to a quality which would have existed in the absence of the KRI plume impact, or to providing a substitute water supply of a quality comparable to that which would have existed without the

KRI plume impacts of excess TDS, TOC, or sulfate. KRI will not be required to remediate water to a quality which exceeds the background quality of the groundwater in the absence of the plume. KRI may select the means of mitigation to be used, at its discretion. KRI shall not be required to remediate other kinds of contamination present in an affected well, nor to remediate water quality beyond the degree of degradation caused by the plume, nor to provide remediation for wells that have become unusable for reasons unrelated to the water quality degradation caused by the KRI plume.

6. The Regional Board agrees that KRI will not be responsible for mitigating any adverse impacts of excess total dissolved solids (TDS) derived from the plume which might occur in new domestic or municipal wells within the existing or projected impact area of the plume as depicted on Exhibit "A", which are not in existence as of the date of execution of this Agreement.

7. This Agreement is entered into with the understanding, based on extensive groundwater investigations prepared by KRI at the direction of the Board, and presented to the Board as required by CAO No. 87-121 and Order No. 91-40, that the plume of degraded groundwater contains salts and organic compounds, but does not contain any priority pollutants. This Agreement does not restrict the Board from exercising

jurisdiction over any priority pollutants which might be subsequently discovered in the plume.

8. Cleanup and Abatement Order No. 87-121 and Order No. 91-40 are hereby discharged, provided that all the terms and conditions of this Agreement are complied with by KRI within the time periods indicated.

9. The Parties represent and warrant that in agreeing to the terms of this Agreement, they have read the Agreement, and they have had the opportunity to have the Agreement explained to them by counsel; they are aware of the content and legal effect of this Agreement, and they are not relying on any representation made by any party, except as expressly set forth in this Agreement.

10. This Agreement constitutes the entire Agreement between the Parties. No modification of this Agreement shall be valid unless in writing and signed by the Parties.

11. This Agreement shall bind and enure to the benefit of the officers, employees, agents, heirs, executors, administrators, successors and assigns of the Parties. The Parties represent and warrant that they have not assigned or transferred, or purported to have assigned or transferred, to any firm, corporation or person or whomsoever, any claim, debt,

liability, demand, obligation, cost, expense, action or cause of action herein released, and agree to indemnify and hold harmless any other party against any claim, debt, liability, demand, obligation, cost, expense, action or cause of action, based on, arising out of or in connection with any such transfer or assignment or purported transfer or assignment.

12. This Agreement shall be construed under the laws of the State of California, and the Parties agree that any action relating to this Agreement shall be instituted and prosecuted in the County of Riverside, California. Each party consents to the personal jurisdiction of the courts in the County of Riverside, and waives the right to change venue. If a suit, action or proceeding is commenced by any party concerning this Agreement, or to recover damages for the breach of any of the terms, or to enforce any such term or provision, or otherwise concerning the rights, duties, or obligations to any party, the prevailing party in such suit shall be entitled to a reasonable sum for attorneys' fees incurred in connection with the action and shall be fixed in such suit, action or proceeding or in a separate action brought for that purpose.

IN WITNESS WHEREOF, the Parties to this Agreement have executed this Agreement on the date set forth opposite the names of each of the persons signing this instrument.

KAISER RESOURCES, INC.

Dated: November 1, 1993. By: _____

Richard Stoddard
Chairman and Chief Executive Officer

CALIFORNIA REGIONAL WATER QUALITY CONTROL BOARD

Dated: Nov. 16, 1993. By: _____

Jerry A. King
Chairman

ATTACHMENT #3

California Regional Water Quality Control Board
Santa Ana Region

December 4, 1992

ITEM: 15

SUBJECT: Discussion Concerning the Acceptability of a Proposal by Kaiser Steel Resources for a Salt Offset Program for Plume Remediation

DISCUSSION:

Between 1943 and 1983, Kaiser Steel Resources, Inc. (KSR), formerly Kaiser Steel Corporation, operated an integrated steel manufacturing facility in Fontana. During the first 30 years of operation at the facility, a portion of KSR brine wastewaters were discharged to unlined surface impoundments on site, and allowed to percolate into the soil. In the early 1970's, the surface impoundments were lined to eliminate discharges to groundwater.

In July 1983, KSR initiated a groundwater investigation which revealed the presence of a plume of degraded groundwater emanating from the facility. The plume contains salts, measured as total dissolved solids (TDS), at concentration between 500-1200 mg/l, and organic compounds, measured as total organic carbon (TOC), at concentrations up to 70 mg/l.

The plume is migrating from the facility in a southwest direction at approximately 300 feet per year. Additional information has further defined the plume as being within the top 150 feet of the saturated zone, and approximately 12,000 feet long and 3,000 feet wide. Currently, the plume is almost entirely off the KSR site. The KSR facility overlies the Chino I groundwater subbasin (TDS objective 220 mg/l), and the plume currently extends into the Chino II groundwater subbasin (TDS objective 330 mg/l).

On August 26, 1987, the Regional Board issued Cleanup and Abatement Order (CAO) No. 87-121, which required additional groundwater investigation and remediation of the plume. KSR completed the plume investigation and identified remediation alternatives. Initially, all of these alternatives centered around a direct plume remediation system: either extract and treat groundwater for reuse, or extract and discharge groundwater to the Non-Reclaimable Waste Line.

Early in 1990, KSR began discussing a salt offset project as an alternative to the extraction and treatment scenarios. KSR proposed to study the feasibility of participating in the construction and operation of a south Chino Basin desalter project as a means of offsetting the effect of its salt plume. Because CAO No. 87-121 focused on direct remediation technologies, it did not

provide adequate time for KSR to investigate the salt offset option. On March 15, 1991, the Board adopted Order No. 91-40, which revised CAO No. 87-121 to allow KSR additional time to conduct further study of the salt offset approach.

Since that time, KSR has worked to identify a specific proposal that would accomplish an appropriate salt offset. Detailed discussions have occured between Board staff, KSR, and the Santa Ana Watershed Project Authority (SAWPA). The primary issues that were addressed in these discussions were the amount of salt that KSR is responsible for remediating, and the degree of KSR participation in SAWPA's desalter project that would accomplish an offset of that amount of salt.

Studies done by KSR have produced a range of estimates of the amount of salt KSR could be required to remove from the basin. These estimates have ranged from 47,000 tons to 104,000 tons. Based on staff's review of the assumptions that were used to prepare these estimates, we believe that the 104,000 ton figure is more consistent with the Basin Plan and the Board's regulatory program. Therefore, we have worked with KSR and SAWPA to identify a proposal that would offset that amount of salt.

Discussions have also occurred between KSR and SAWPA to identify an appropriate means of contribution to the desalter project. Throughout this process, KSR has pursued an offset proposal that would involve a contribution of both cash and KSR water rights to the project. Based on those discussions, KSR has made a proposal, to both SAWPA and Board staff, to contribute $1.5 million and its rights to 1,000 acre-feet of water for 25 years. SAWPA has performed calculations to determine the present worth value of this contribution, as well as its "salt value." Based on these calculations, KSR's offer has a present worth value of approximately $8.6 million, which is equivalent to about 100,000 tons of salt removed over a 20-year project (or more if a longer project life is assumed). Based on these calculations, Board staff believes that KSR's offer is appropriate and should be approved.

Another aspect of KSR's offer is that it may not be feasible for KSR to contribute the cash and water rights directly to SAWPA. Staff has therefore explored options for transferring the cash to the Cleanup and Abatement Account in a manner that would allow it to be used to fund the desalter project. This approach would likely require a formal action by the Board to establish the appropriate mechanism. We are still exploring options to provide for the transfer of water rights to the project.

If the Board has no objections to the basic approach outlined in KSR's offer, staff would propose to work with KSR, SAWPA, and the State Board to draft a detailed agreement

between the necessary parties, describing all relevant aspects of the settlement and the transfers of cash and water rights. This draft agreement would then be presented to the Board for consideration at a future meeting.

ATTACHMENT #4

City of Ontario - TDS Levels

Well 26		Well 27		Well 30		Well 31		Well 36	
Oct-71	230	Oct-71	175						
Jul-72	265	Jul-72	190						
Sep-73	240	Aug-73	180						
1974		Aug-74	185						
1975		Aug-75	190						
Aug-76	245	Aug-76	195						
1977		Jul-77	165			First year of			
Jun-78	205	Jul-78	150	First year of		operation was 1979			
Jun-79	220	Jun-79	185	operation was 1980		Jan-79	255		
May-80	225	May-80	145	***1980***	***250***	**1980**			
Apr-81	190	**1981**		May-81	290	Jun-81	255		
May-82	225	May-82	200	Jun-82	270	**1982**			
Jun-83	210	May-83	205	Jun-83	295	**1983**			
Jun-84	235	**1984**		Jun-84	325	Jul-84	235		
Jun-85	200	Oct-85	205	**1985**		Jul-85	245		
Apr-86	170	**1986**		Jun-86	315	Apr-86	260		
Apr-87	220	Apr-87	245	Apr-87	395	Apr-87	280		
May-88	240	Jun-88	250	**1988**		May-88	270	First year of	
Jul-89	245	May-89	255	Apr-89	420	May-89	215	operation was 1990	
Nov-90	225	**1990**		Oct-90	440	Nov-90	265	***1990***	***195***
Aug-91	190	**1991**		Aug-91	445	Aug-91	235	Aug-91	200
Aug-92	230	**1992**		Aug-92	590	Aug-92	270	Aug-92	185
Mar-93	235	May-93	205	***1993***	***383***	***1993***	***272***	Apr-93	190
Jan-94	225	Jan-94	200	***1994***	***448***	Jan-94	265	Jan-94	180
Feb-95	245	Feb-95	185	***1995***	***520***	Feb-95	295	Apr-95	195
Jul-96	220	Jul-96	220	1996		Jul-96	290	Jul-96	220
Aug-97	296	Aug-97	270	***1997***	***531***	Aug-97	264	Aug-97	253
Aug-98	230	Aug-98	260	***1998***	***532***	***1998***	***295***	Aug-98	200
Aug-99	250	Aug-99	300	***1999***	***490***	Aug-99	320	Aug-99	200
Aug-00	230	Aug-00	280	**2000**		Aug-00	290	**2000**	
2001		Mar-01	220	Feb-01	560	Mar-01	290	**2001**	

List of sample data used to compile average (shown in bold above):

Well 30
30- 2/80 260
30- 6/80 240
30- 3/93 395
30- 5/93 200
30- 5/93 330
30- 5/93 500
30- 5/93 490
30- 5/93 480
30- 5/93 285
30- 4/94 530
30- 9/94 545
30- 9/94 545
30- 9/94 175
30- 9/95 560

Well 30
30- 9/95 481
30- 8/97 525
30- 9/97 330
30- 9/97 270
30- 10/6/97 520
30- 10/6/97 608
30- 10/6/97 626
30- 10/6/97 597
30- 10/9/97 660
30- 10/14/97 471
30- 10/14/97 541
30- 10/14/97 720
30- 10/20/97 608
30- 10/27/97 640

Well 30
30- 10/27/97 595
30- 10/27/97 640
30- 9/98 570
30- 9/98 270
30- 9/98 630
30- 9/98 610
30- 9/98 630
30- 11/98 480
30- 6/99 420
30- 8/99 560

Well 31
31- 3/93 270
31- 5/93 275
31- 8/98 300
31- 11/98 290

Well 36
36- 5/90 200
36- 11/90 190

well not sampled

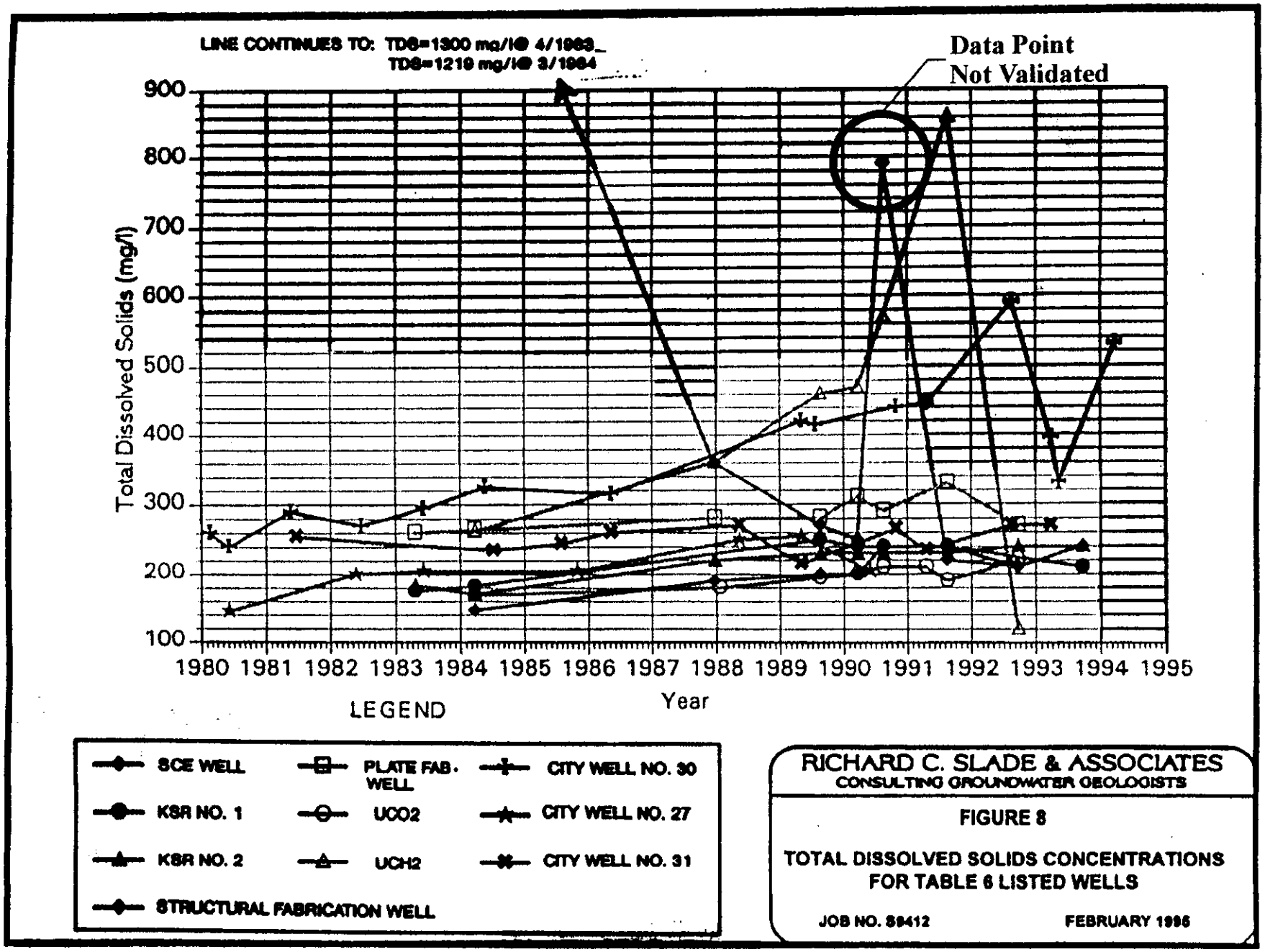
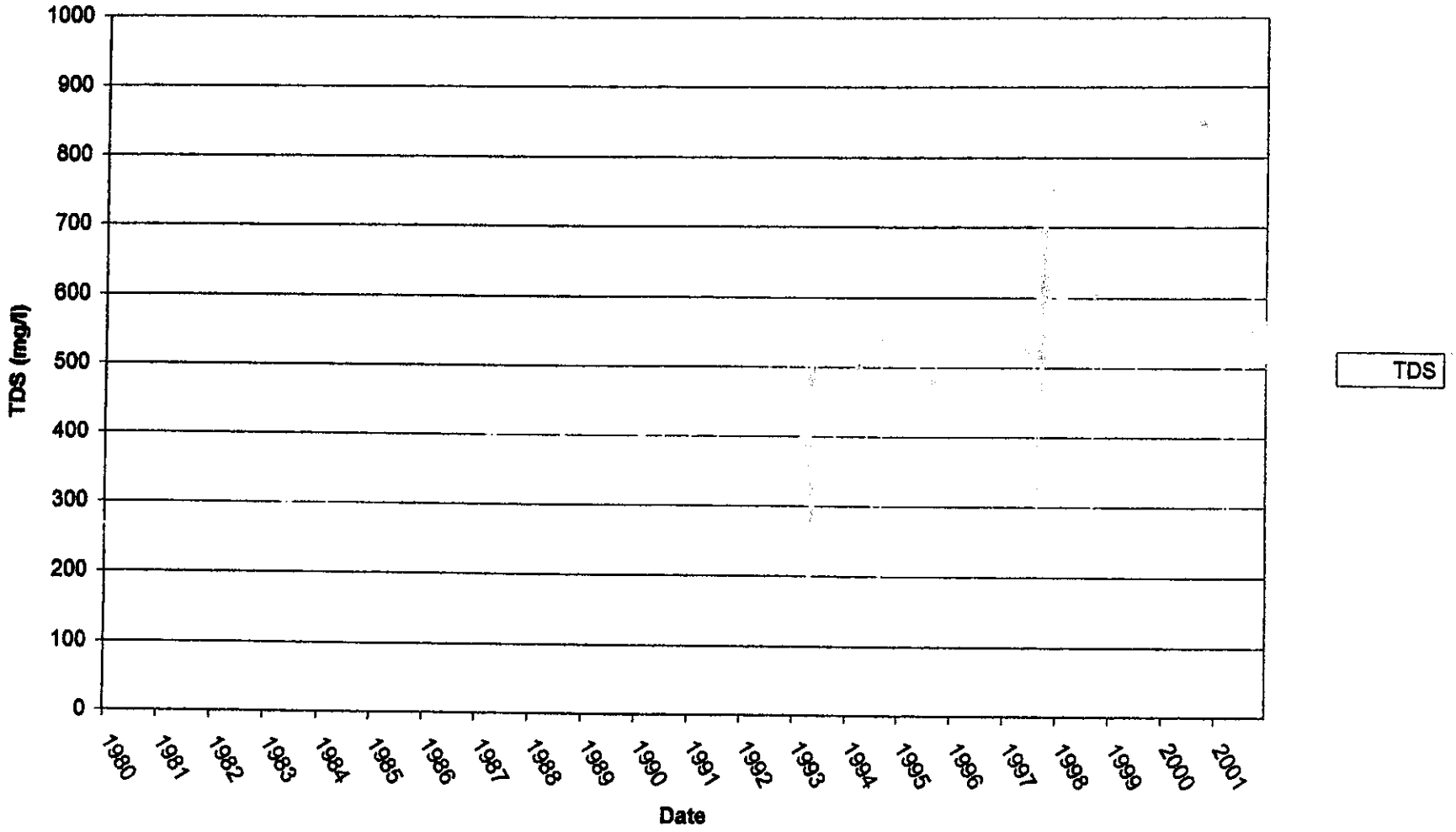

LINE CONTINUES TO: TDS=1300 mg/l@ 4/1993
TDS=1219 mg/l@ 3/1994
Data Point
Not Validated
900
800
700
600
500
400
300
200
100
Total Dissolved Solids (mg/l)
1980 1981 1982 1983 1984 1985 1986 1987 1988 1989 1990 1991 1992 1993 1994 1995
Year
LEGEND
SCE WELL
PLATE FAB. WELL
CITY WELL NO. 30
KSR NO. 1
UCO2
CITY WELL NO. 27
KSR NO. 2
UCH2
CITY WELL NO. 31
STRUCTURAL FABRICATION WELL
RICHARD C. SLADE & ASSOCIATES
CONSULTING GROUNDWATER GEOLOGISTS
FIGURE 8
TOTAL DISSOLVED SOLIDS CONCENTRATIONS
FOR TABLE 6 LISTED WELLS
JOB NO. 89412
FEBRUARY 1995

Figure C.5

FIGURE F.1:
City of Ontario Well #30
Plot of TDS vs. Time



-copy- Source: Hromadka Report dat. 4/28/03

ATTACHMENT #5

8.1 Continued

Construction Engineering Dept.
April 20, 1961

M E M O R A N D U M

Subject: Industrial Waste Water from
Liquid Hydrogen Plant
Project-LFC-Fontana, California

- -

In order to investigate the problems which may be encountered with the Water Pollution Control Board regarding the disposal of industrial waste water, we have prepared a list of all sources and approximate contaminants for the entire facility. We currently plan to pipe all waste water to an evaporation pond located on our property on the west side of Etiwanda Avenue. The size of the pond will not be established until a thorough soil study has been completed.

The following waste water streams will be manifolded and piped to the evaporation pond:

Stream A - Cooling Tower Blowdown

Approximate rate	200 GPM
Frequency	Continuous

Contaminants and approximate composition

Cations	PPM	Anions	PPM
Calcium	168	Carbonate	0
Magnesium	18	Bicarbonate	630
Sodium	48	Chloride	30
Potassium	4.8	Nitrate (NO_3)	22.5
		Fluoride	0.78
		Sulfate	15

The concentrations of sulfate ions present will be considerably higher than indicated above, since it will no doubt be necessary to add sulfuric acid for pH control. Further, there will be other contaminants present in small amounts for algae and corrosion control. These additives will no doubt be in accordance with water pollution regulations.

Stream B - Cooling Tower Sand Filter Back Wash

Rate:	The back-wash rate on this filter will be at the rate of 1000 to 1500 GPM for 2 to 5 minute periods. The frequency of these back washes will depend on the condition of the water which is a function of atmospheric conditions - particularly wind velocity. In any case, it is

Stream B -

Rate: (continued)

expected that the filter will be back washed at least once each shift or 3 times per day.

Contaminants and Composition

The contaminants and composition for the water diccharged to the evaporation pond will be the same as those listed for the Cooling Tower Blowdown - Stream A.

Stream C - Boiler Feed Water Treatment

Rate:	Average flow rate 11.4 GPM Maximum instantaneous flow 66 GPM
Frequency	Continuous

Contaminants:	PPM
Calcium Chloride	2600
Magnesium Chloride	640
Sodium Sulfate	2700
Sodium Chloride	200 pounds per day

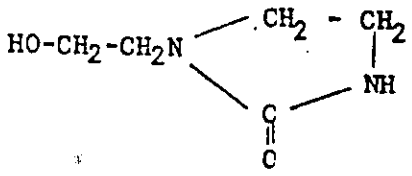
Stream D - MEA Purifier Drains

Quantity	100 to 150 gallons
Frequency	Periodic draining of equipment with total drain between 100 and 150 gallons over a seven-day period.

Composition:

The exact composition is not known, however, it will be a weak solution in water of the following compounds:

(1) (MEA) - Monoethanolamine: $HO\text{-}CH_2\text{-}CH_2\text{-}NH_2$

(2) 1 - (2 hydroxyethyl) imidazolidone - 2 

(3) N - (2 hydroxyethyl) ethylenediamine: $HO\text{-}CH_2\text{-}CH_2\text{-}NH\text{-}CH_2\text{-}CH_2\text{-}NH$

(4) Sodium Carbonate

Stream E - Intermittent Drains from Reformer Area

Rate	Approximately 5 gallons per week
Contaminants:	Carbon Dioxide Saturated at 150°F.

Stream F - Boiler Blowdown

Rate:	18-20 GPM @ 220 Degs. F.
Frequency	Continuous

Contaminants:	PPM
Sodium ion	210
Bicarbonate ion	10
Chloride ion	200
Sulfate ion	2000
Tricalcium phosphate	1500

Stream G - Reformed Gas Cooler and Hydrogen Feed Aftercooler

Rate:	1/2 GPM each - total 1 GPM
Frequency:	Continuous

Contaminants:

This stream will be saturated at ambient temperature with the following:

Carbon dioxide
Carbon Monoxide
Nitrogen
Methane
Hydrogen

The flow rates and contaminants indicated in this memorandum reflect the best engineering information available at this time. Actual conditions experienced during operation of the plant may be somewhat different from those presented herein.

(Signed) F. W. Gore

FWG/ecs

cc: R. M. Corp (6)
R. T. Henry
K. Desai
R. J. Schiffhauer

ATTACHMENT #6

PHASE I ENVIRONMENTAL SITE ASSESSMENT AND LIMITED PHASE II INVESTIGATION REPORT FOR 5705 AIRPORT DRIVE, ONTARIO, CALIFORNIA

PROJECT NO. 143387

RECEIVED
DEC - 2 1997
PRAXAIR, INC.
JOE LOPEZ

Submitted to:

PRAXAIR INC.
Western Region
1785 Old Oakland Road
San Jose, California 95131

Prepared by:

CH2M HILL
3 Hutton Centre Drive, Suite 200
Santa Ana, CA 92707

November 1997

Revision: FINAL

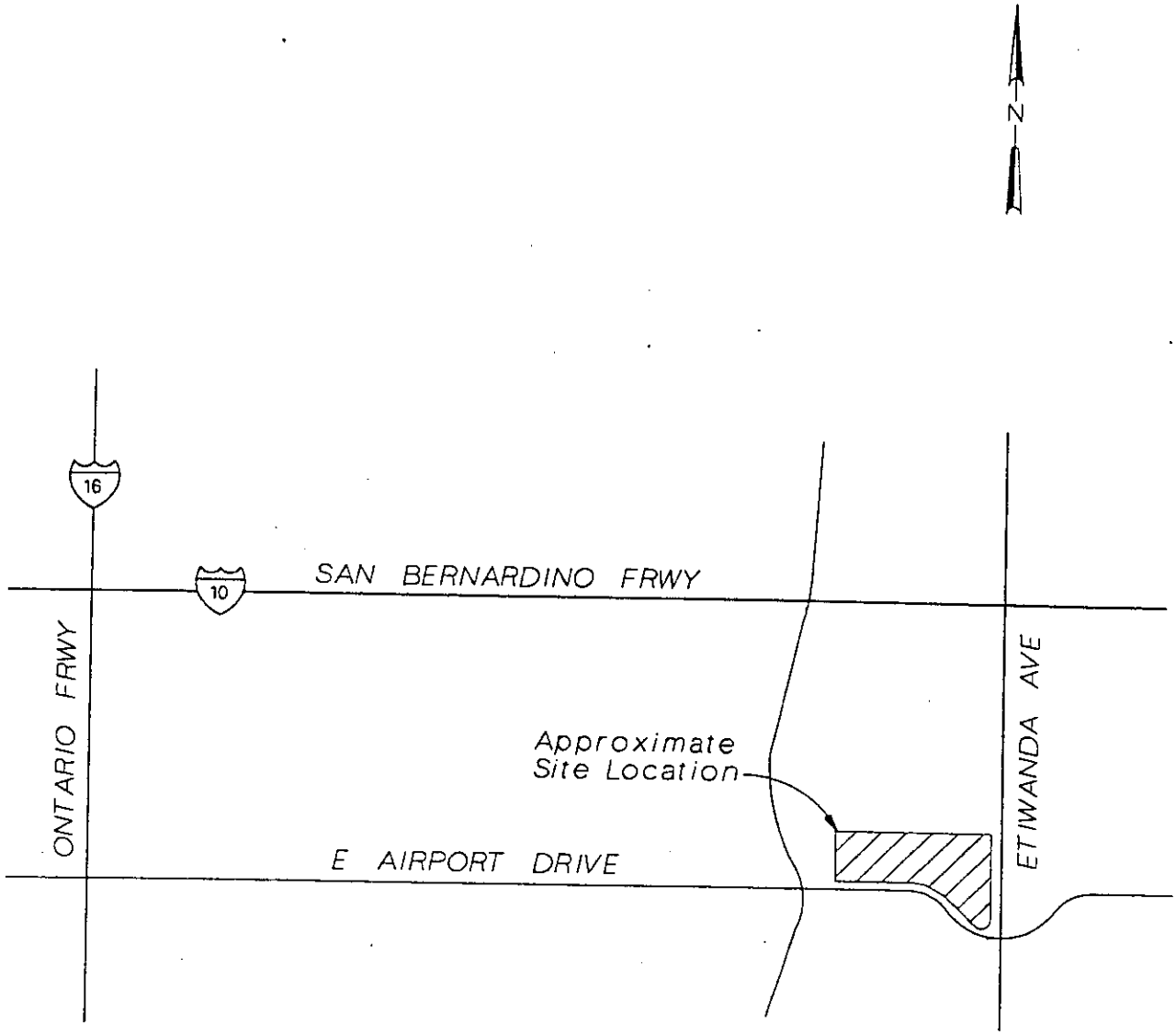


Figure 1-1
Site Location Map

5.0 Site Reconnaissance

CH2M HILL conducted a site reconnaissance of the subject property on October 23, 1997 to assess to current land use and potential environmental concerns at the subject property and surrounding properties. Photographs were taken of the subject property and immediately adjacent properties on the day visited and are included in Appendix A.

5.1 Subject Property

The subject property consists of a vacant, relatively flat, dirt area, with sparse vegetation and two subsurface impoundments, an abandoned subsurface liquid natural gas holding tank, and a small wooden structure at the southeast corner of the property. The surface impoundments and abandoned holding tank are surrounded by an 6-foot chain-link fence with one access swing-gate to each of the enclosed areas. Three aboveground pipelines were observed to run across the property in an east/west direction.

The property is bounded on the south side by Airport drive and a shipping/warehouse facility, on the west by the Praxair facility, on the north by the Southern Pacific Railroad and the San Bernardino Freeway, and on the east by Etiwanda Avenue and additional Praxair facilities. Figure 5-1 shows a site map and the general layout of the property. Photographs of the property are included in Appendix A.

No surface staining was observed at the subject property, and no evidence of fill material or any waste container storage was observed on the property. No evidence of vent pipes or surface features that would indicate the presence of an underground storage tank(s) was observed. There was no visible evidence of wells at the subject property. There were no objectionable odors noticed during the site reconnaissance on the subject property.

An interview with the Mike Stenberg, Plant Manger at the Praxair facility, was conducted. The following information was obtained during the interview.

- The Praxair property was reported to have been initially developed in the early 1960s and the subject property was never developed for any purpose other than the surface impoundments and the experimental subsurface liquid natural gas holding tank.
- The adjacent warehouse shipping facilities (see photo #1 Appendix A) were constructed in the late 1970s.
- The subject property has reportedly never been used for dumping or disposal of any chemicals, containers, or fill materials.
- The two surface impoundments were reportedly excavated from the existing grade to create the subsurface ponds (see photos #2 through #5, Appendix A). The ponds were reported to have been used from approximately 1962 to 1970 for holding boiler blow-down and cooling water discharges. A list of the chemicals used in these waste streams was provided by the Praxair representative and is included for reference in Appendix D. Subsequent to 1970 these waste streams have reportedly been discharged to the non-reclaimable wastewater sewer at the Praxair facility.

ATTACHMENT #7

Summary of Correspondence between RWQCB staff, City of Ontario, and Kaiser Representatives

- On March 15, 2001, the RWQCB received a letter from legal counsel representing the City of Ontario that formally requested that the RWQCB enforce its Settlement Agreement with Kaiser and issue a CAO to mitigate the adverse impacts of Kaiser's plume.

- RWQCB staff reviewed data submitted by the City of Ontario and requested additional information in a letter dated June 21, 2001 to better assess the impact to Well No. 30 and the potential source of the impact.

- On August 3, 2001 RWQCB staff informed Kaiser regarding the City of Ontario's request to enforce the Settlement Agreement. RWQCB staff requested a prompt response from Kaiser outlining Kaiser's next course of action because Kaiser is entitled to make its own investigations, present evidence to the Board, and participate in any Board hearings on the existence and significance of impacts, and on any proposed mitigation measures (Section 4.)

- Kaiser responded on August 15, 2001. Kaiser's response included a statement that they believed that other potentially responsible parties are impacting Well No. 30 and they invoked their rights to conduct an investigation and evaluation of Ontario's claim, present the findings to RWQCB staff and reserve their rights to pursue other potentially responsible parties.

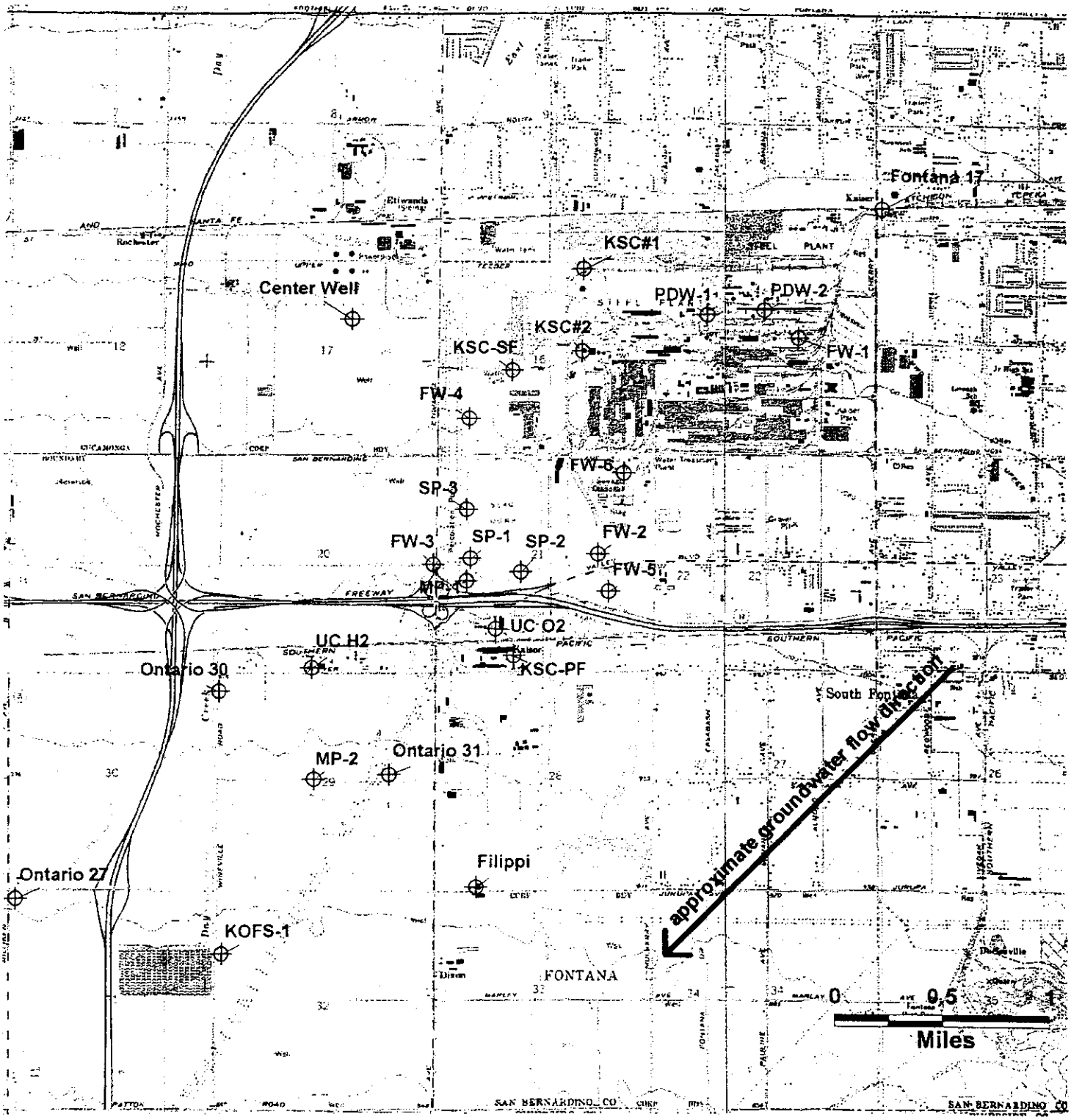
- RWQCB staff issued another letter to Kaiser on August 31, 2001 requesting an outline and time schedule of their planned actions as requested in the August 3, 2001 RWQCB letter.

- Kaiser submitted their outline and time schedule on October 1, 2001 and RWQCB staff approved the outline and time schedule on October 9, 2001.

- A meeting was held on December 21, 2001 where Kaiser presented their analysis of Ontario Well No. 30 data.

- On March 14, 2003 RWQCB staff met with representatives from the City of Ontario and Kaiser one last time and asked the City of Ontario to formally submit a report summarizing their interpretation of the data by April 30, 2003. Kaiser was told that they may respond to the City of Ontario report with a technical rebuttal by June 30, 2003. The City of Ontario submitted their report in a timely manner but Kaiser did not provide a technical rebuttal only a letter dated August 15, 2003 stating that the Settlement Agreement should not be triggered and that other sources may be a source of TDS instead of the Kaiser plume.

FIGURES



⊕ **Wells With Available Groundwater Quality Data**

N

References: Guasti, California, U.S.G.S. 7.5 Minute Series Topographic Map Quadrangle dated 1966, photorevised 1981

Fontana, California, U.S.G.S. 7.5 Minute Series Topographic Map Quadrangle dated 1967, photorevised 1980

Wildermuth, M. J., 1995; Groundwater Production and Monitoring Wells in the Vicinity of KSR Facility, Plate 1

MISSION GEOSCIENCE, INC.
ENVIRONMENTAL & GEOTECHNICAL CONSULTANTS

WELL LOCATION MAP
Vicinity of Former Kaiser Steel Mill
Fontana, CA

Figure: 1
File No.: 97-109

ALBERT A. WEBB ASSOCIATES /
CITY OF ONTARIO

CITY OF ONTARIO CITY-WIDE EVALUATION
OF GROUND WATER PRODUCTION POTENTIAL

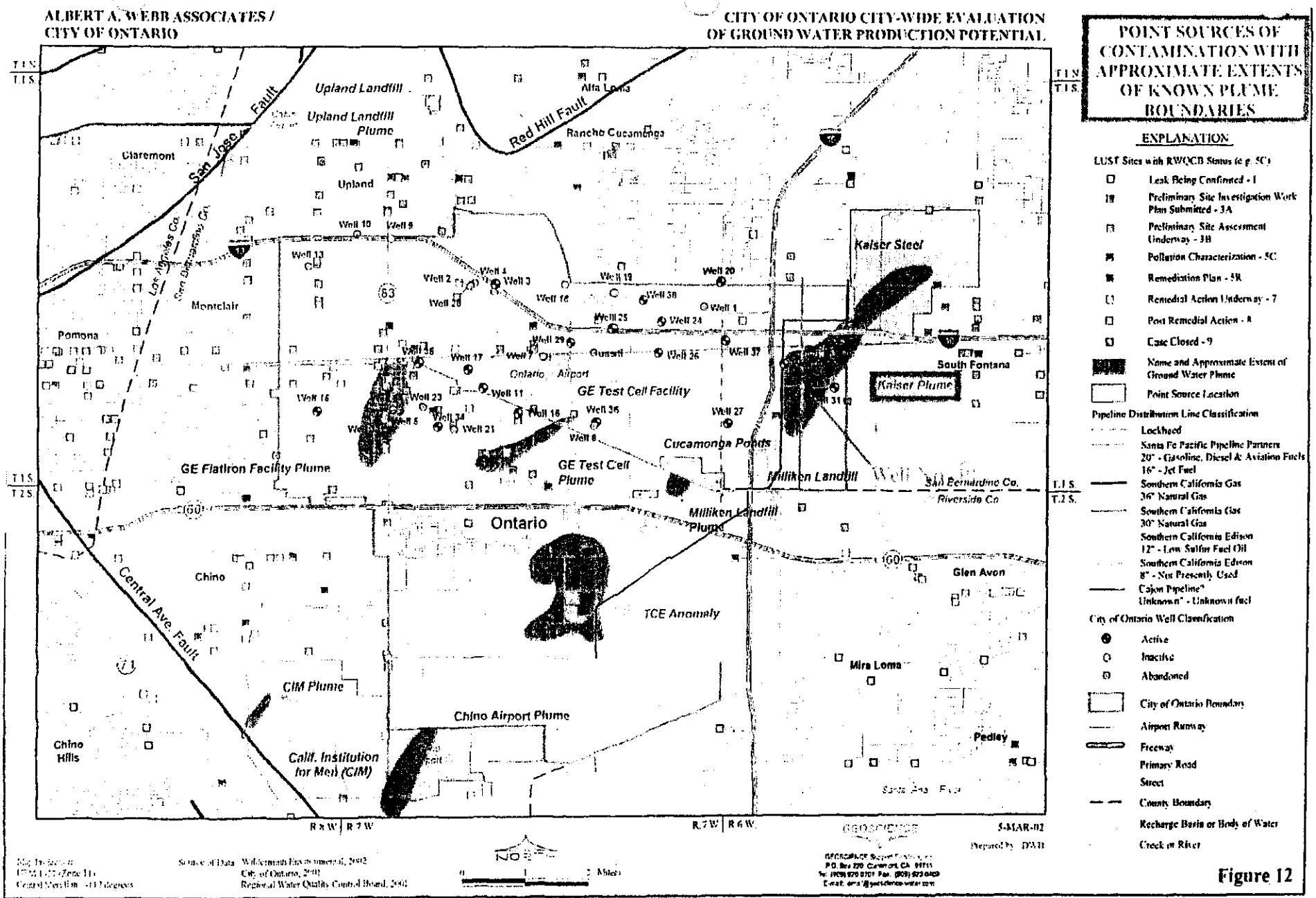


Fig. 3.6